AF/1771/IFW

Appl. No.	:	10/034,907
Applicant	:	Ann M. Sutherland et al.
Filed	:	December 27, 2001
Title	:	Casement Fabrics
TC/A.U.	:	1771
Examiner	:	J. R. Pierce
Docket No.	:	125616-1000

CERTIFICATE OF MAILING
(37 CFR 1.8a)

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail and in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Anne Ziegler

Anne Ziegler

(Signature of person mailing paper)

Date: July 20, 2004

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL FOR BRIEF ON APPEAL

Pursuant to the Notice of Appeal filed May 24, 2004 in the above-identified patent application, Appellant hereby submits to the Board of Appeals and Interferences the following:

A Brief on Appeal in triplicate; and

A check for $165 in payment of the fee for the Brief on Appeal.

Please charge any fees due or credit any overpayments to Deposit Account No. 07-0153.

Respectfully submitted,

Date: 7/20/04

Michael E. Martin
Registration No. 24,821
Agent for Applicants

Gardere Wynne Sewell LLP
1601 Elm Street, Suite 3000
Dallas, Texas 75201-4761
Phone (214) 999-4052
Fax (214) 999-3052

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BRIEF ON APPEAL

Sir:

Pursuant to a Notice of Appeal in the above-identified patent application, filed May 24, 2004, Appellants submit the following Brief on Appeal.

REAL PARTIES IN INTEREST

The real parties in interest in the above-identified patent application are the inventors, Ann M. Sutherland and David F. Sutherland.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to Appellants which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

STATUS OF CLAIMS

Claims 11 through 16, 18 and 19 are currently pending in this application pursuant to an amendment filed on December 1, 2003.

Claims 1 through 10 and 17 have been canceled.

Copies of Claims 11 through 16, 18 and 19 are attached as an Appendix to this Brief on Appeal.

STATUS OF AMENDMENTS

An amendment was filed on December 1, 2003 in response to a first Office Action dated August 26, 2003. A final rejection of Claims 11 through 16, 18 and 19, filed in the amendment of December 1, 2003, was mailed March 1, 2004.

SUMMARY OF THE INVENTION

The present invention pertains to a light transmitting window covering panel formed of a fabric which is particularly resistant to ultraviolet light and is provided in a structural arrangement wherein suitable human visual perception is possible through the panel. Commercial buildings including office buildings and hotels, for example, suffer significant damage over time from ultraviolet radiation from sunlight. Window coverings known as sheers are hung in windows in many commercial buildings, hotels and residential dwellings to allow light to enter a room and also permit humans occupying the room to see through the fabric of the sheers to the outside world. However, prior to the development of the present invention, fabrics used for known types of sheers and the light transmitting characteristics of such window coverings have been unsuitable for the sheers themselves and have not provided adequate protection for opaque window coverings (draperies) and furnishings within the room at which the window coverings are hung.

As shown in the application drawing figures, and as described in paragraph 0013 of the specification, light admitting window covering panels (20) and (22) may be hung in a conventional manner between a window and an opaque window

covering and when the opaque window covering is in an open condition, the panels (20) and (22) may admit a substantial amount of light through a window, such as the window (10) while also allowing persons within a room to view the outside world in some detail with the panels in their closed positions.

As described in paragraph 0014 of the specification, the fabric (24) of the panels (20) and (22) is formed of a pigmented or solution dyed polymer yarn formed from 100% pigmented acrylonitrile fibers. Acrylic yarn is preferred for its resistance to degradation by ultraviolet light as well as for its ultraviolet radiation absorbing or reflectivity capability.

In accordance with the present invention, as described in paragraph 0014 of the specification, the fibers for the panels of the present invention have a denier of about 2.0 and the yarn strands have a count or yarn number of 24 and are two-ply. Still further, as pointed out in paragraph 0014 of the specification, the weave structure is preferably formed of groups (26) of three warp strands or threads (27) together with groups (28) which are also each formed of three weft or fill strands or threads (29). The spacing of the threads is approximately twenty-nine ends per inch for the warp threads (27) and twenty-four picks per inch for the weft or fill threads (29), leaving approximately 0.063 inch square openings (30) between adjacent groups (26) and (28) of warp and fill threads. This weave structure provides a weight per lineal yard of approximately 5.5 ounces for the yarn fabric described.

As pointed out in paragraph 0015 of the specification, a fabric having a specification as set forth in the application has been indicated to be capable of blocking ultraviolet light in the A category wavelength in a range of about 69 percent to 76 percent, depending on fabric color, while also being capable of blocking ultraviolet light in the B category wavelength in a range of about 74 percent to 78 percent. As illustrated in FIGURE 2 of the drawings, each group of warp

threads comprises three strands disposed adjacent one another between the openings in the threads. As also illustrated in FIGURE 2, each group of weft threads comprises three threads disposed adjacent one another between openings in the threads, respectively.

As pointed out in paragraph 0017 of the specification, the weave structure for the fabric (24) may be varied whereby the weave pattern may be a plain weave, and the weave density may be varied to provide openings (30) in the fabric of from 0.03 to 0.25 inches square.

ISSUES

The issues presented for review in this appeal are:

Whether Claims 11 and 14 through 16 are unpatentable under 35 U.S.C. 103(a) over the teaching of US Patent 4,861,651 to Goldenhersh in view of US Patent 6,268,450 to Wade, and

Whether Claims 11 through 16, 18 and 19 are unpatentable under 35 U.S.C. 103(a) over the teaching of US Patent 6,037,280 to Edwards et al. in view of Wade and further in view of US Patent 5,503,917 to Hughes.

GROUPING OF CLAIMS

Appellants consider the rejected claims to be separately patentable and that the claims do not stand or fall together. Appellants present hereinbelow the reasons why the claims are considered separately patentable.

ARGUMENTS

Independent Claims 11 and 16 presented on appeal are directed to a light transmitting window covering panel formed of a fabric comprising acrylic yarn having particular characteristics. In the final rejection, the Examiner states that recitation of a window covering panel cannot be given patentable weight because it is in the preamble of the claims and because it is an intended use of product. Appellants respectfully submit that the claims presented on appeal are

not directed to an intended use of a particular composition or structure. The claims clearly recite what the article actually is and Appellants respectfully submit the preambles of the claims are the only suitable place to recite the actual definition of the article. Appellants have developed a novel combination of structural features in a light transmitting window covering panel which is unappreciated by the prior art. The claims are not directed to an intended use of a known composition but are in fact directed to a specific article having novel features which are not anticipated by the prior art nor made obvious by the teaching of the art, whether the references are taken alone or one reference modified in view of another.

The Examiner has also indicated in the final rejection that the references cannot be attacked individually. However, Appellants have previously pointed out and will point out hereinbelow that the references taken alone or one modified in view of the other fail to teach the overall combination of features recited in Claims 11 and 16, together with the claims dependent thereon, respectively. Appellants have pointed out before and hereinbelow how each of the references is lacking in its teaching or in making any suggestion to provide the combinations set forth in Appellants' claims.

In the final rejection the Examiner rejected Claims 11 and 14 through 16 under 35 U.S.C. 103(a) as being unpatentable over the Goldenhersh reference in view of the Wade reference. As pointed out in Appellants' Amendment A, in the prosecution of this application, the Goldenhersh reference discloses a UV blocking material comprising a woven fabric which may be formed of natural or synthetic materials, but Goldenhersh fails to disclose a fabric formed of about 100% pigmented acrylonitrile polymer as required by both Claims 11 and 16 presented on appeal. Goldenhersh is directed to the provision of a UV blocking and breathable fabric having a coating at least partially disposed in the apertures or openings formed between the fabric threads.

Appellants' Claims 11 and 16 do not require a fabric wherein a coating material is at least partially disposed in the openings between the warp threads and weft threads of Appellants' light transmitting window covering panels. In fact, such a coating would impair human visual perception through the panels. Accordingly, Claims 11 and 16 require openings between threads. Goldenhersh teaches covering such openings with a coating, thus there are, in effect, no openings in the fabric of Goldenhersh.

Still further, Goldenhersh fails to disclose or suggest the provision of a light transmitting window covering panel formed of a yarn woven in groups of warp threads and groups of weft threads to provide openings between the thread groups in the size range required by Claims 11 and 16 while providing human visual perception through a window covering panel and while also blocking the transmission of ultraviolet light in category A wavelength and category B wavelength as set forth in Claims 11 and 16. Moreover, without the use of the coating required in Goldenhersh, the UV category A and UV category B radiation reduction provided by the fabric of Goldenhersh was only about 31 percent to 39 percent as indicated in the table of Goldenhersh. Goldenhersh clearly fails to suggest or appreciate the provision of a light transmitting window covering panel with the characteristics of the panels claimed in Claims 11 and 16.

With regard to the teaching of the Wade reference, Wade discloses an acrylic fiber polymer precursor for fabrics for use in outdoor applications, such as awnings and patio furniture coverings. Wade, as well as Goldenhersh, does not suggest using Wade's 90 percent to 98 percent acrylonitrile acrylic fiber polymer precursor as a window covering panel, nor does Wade suggest a weave density as required by Claims 11 and 16, nor a yarn number of about 24, as required by Claim 16, nor providing fabric to be formed of groups of adjacent warp threads and groups of adjacent weft threads providing openings between the thread groups having the size range required by Claims 11 and 16.

In the final rejection, the Examiner states that it would have been obvious to one of ordinary skill in the art to adjust the opening size in the fabric of Goldenhersh to the range of about 0.03 to 0.25 inches, as set forth in Appellants' claims, in order to optimize the fabric breatheability and UV protection properties. However, even though the prior art cited in the rejection of Claims 11 and 14 through 16 fails to suggest this critical limitation in Claims 11 and 16, it is not the breatheability that is required of Appellants' panels, but the UV blocking capabilities and also human visual perception through the window covering panels that are desirable features. Appellants respectfully submit that a novel and patentable combination of structural features in a window covering panel is set forth in independent Claims 11 and 16 presented on appeal, that the Examiner has failed to cite a reference or a combination of references which disclose or suggest the limitations required in Claims 11 and 16, including the yarn weight required by Claim 16.

Still further, the Examiner states that, with regard to the percentages of UV A category and B category wavelengths which are blocked by the window covering panels of Claims 11 and 16, it would be a matter of adjusting the result effective variable of the size of the fabric openings and it would be obvious to provide the opening size range claimed in order to achieve the desired final properties of the fabric. However, the prior art cited by the Examiner in rejecting the claims clearly fails to suggest these properties. Appellants respectfully submit that, absent a suggestion in the prior art to provide the limitations required by the claims, the claims cannot be rejected and that Claims 11 and 16 are patentably distinct.

With regard to the rejection of Claim 14 under 35 U.S.C. 103(a), as pointed out hereinabove, neither reference (Goldenhersh or Wade) suggests that the yarn weight be not less than a yarn number of about 24. The overall combination of structural features in a light transmitting window

covering panel required by Claims 11 and 14 are not made obvious by the teaching of the prior art since the art fails to disclose or even suggest yarn weight, or the grouping of fabric threads, for example. Claim 14 is believed to be patentably distinct.

With regard to the rejection of Claim 15 under 35 U.S.C. 103(a) over Goldenhersh in view of Wade, Appellants respectfully submit that the limitation of the yarn being two ply, as recited in Claim 15, in order to provide the requisite strength, is not made obvious since neither reference suggests such a requirement. Accordingly, Claim 15, taking into account the requirements for the opening size and grouping of threads, limitations of Claim 11, is also believed to be patentably distinct.

Goldenhersh and Wade together, or one modified in view of the other, fail to suggest the overall combination of features in a window covering panel having light transmitting capability and ultraviolet light blocking capability required by Appellants' claims. The Examiner's rejection of Claims 11 and 14 through 16 over Goldenhersh in view of Wade is believed to be in error.

In the final rejection, the Examiner rejected Claims 11 through 16, 18 and 19 under 35 U.S.C. 103(a) as being unpatentable over the teaching of US Patent 6,037,280 to Edwards et al. in view of the Wade reference and further in view of US Patent 5,503,917 to Hughes.

With regard to the rejections of Claims 11 and 16, the Edwards et al. reference is directed to fabric which is provided with UV blocking particles, the fabric being indicated to be particularly useful for clothing. The UV blocking particles may have an aspect ratio of from two to ten may be inorganic, organic or metallic, may reside predominantly in the "interstitial spaces" of the fabric or in the "pores" of the fabric. The UV blocking particles are preferably retained within the fabric using a binding agent. Edwards et al, like Goldenhersh, teaches the provision of particles which are lodged in the "pores" (openings) of the

fabric. Thus, Edwards et al. also teaches away from providing openings in the fabric. Moreover, Edwards et al. does not disclose or suggest a fabric comprising an acrylic yarn woven in groups of warp threads and groups of weft threads, the fiber content of which is about 100% pigmented acrylonitrile polymer, as required by Claims 11 and 16. Still further, Edwards et al. does not disclose the size of openings between groups of threads, nor does Edwards et al. suggest a light transmitting window covering panel having openings in the size ranges required by Claims 11 and 16 to provide human visual perception through the panel while blocking the transmission of UV light in A category and B category within the ranges or limits required by Claims 11 and 16.

As pointed out previously with regard to the Wade reference, although Wade discloses an acrylic fiber polymer precursor for use in fabrics used in outdoor applications, such as awnings and patio furniture coverings, Wade is not concerned with providing a window covering panel having both the light transmissivity and UV light blocking characteristics required by Claims 11 and 16. Accordingly, substituting an acrylic fiber polymer precursor, as suggested by Wade, into the fabrics disclosed by Edwards et al. would still not provide the overall combinations of features required by Claims 11 and 16, as pointed out hereinabove.

With regard to the teaching of the Hughes reference, although this reference discloses nylon fabrics for clothing, primarily wherein various yarn counts are tested for UV light transmissivity. Hughes does not disclose or suggest provision of a 100% pigmented acrylonitrile polymer having a weave density, nor a grouping of warp threads and weft threads, arranged to provide for openings sizes in the fabric in the size range required by Claims 11 and 16 and which fabrics still provide for UV radiation blockage in the ranges required by Claims 11 and 16.

Again, the Examiner, in finally rejecting Claims 11 through 16, 18 and 19 over the combination of references of

Edwards et al., Wade and Hughes, takes the position that the range of opening sizes, the grouping of threads and the weave density providing the opening sizes would be obvious to one of ordinary skill in the art. However, the prior art cited by the Examiner clearly fails to suggest the claimed range of opening sizes in the fabrics, and the arrangement of groups of threads between openings, nor does the prior art achieve the ability to provide human visual perception through a window covering panel while blocking category A and category B UV radiation in the ranges or limits required by the claims.

Appellants respectfully submit that the Examiner has erred in rejecting Claims 12 and 13 over the teaching of Edwards et al., Wade and Hughes. None of these references teach or suggest a grouping of three warp threads disposed adjacent one another between openings in the fabric as required by Claim 12 nor the grouping of three weft threads disposed adjacent one another between the openings as required by Claim 13. Absent any disclosure or suggestion to provide the claimed features in any of the references, alone or in combination, Appellants respectfully submit that the rejection is improper and that Claims 12 and 13 clearly define a patentable combination.

With regard to Claims 18 and 19, these claims are also believed to be patentable taken together with the combination of features of Claim 16 for the same reasons as set forth above with respect to the patentability of Claims 12 and 13. Claims 18 and 19 each recite the grouping of three warp threads disposed adjacent one another between the openings and three weft threads disposed adjacent one another between the openings in the fabric, respectively. This particular grouping of threads together with the size range of the openings between the groups of threads as required by parent Claim 16 provides the visual perception capability and the UV radiation blocking capability required by Claim 16. None of these features are suggested to be combined by the prior art

and provided in a window covering panel, as set forth in Appellants' claims.

With regard to the rejection of Claims 14 and 15 over the Edwards et al. reference in view of Wade and further in view of Hughes, none of these three references suggest a yarn weight of not less than about 24 yarn number, as required by Claim 14, nor that a pigmented acrylonitrile polymer yarn have a two ply characteristic as required by Claim 15. The Examiner points out that the Hughes reference teaches a two ply nylon yarn in a fabric having a high degree of user comfort and UV radiation protection. Appellants' claims are not directed to a fabric having a high degree of user comfort. Appellants' claims are directed to a window covering panel having a high degree of human visual perception and a high degree of UV radiation blocking and formed of an acrylonitrile polymer having groupings of threads to provide openings in a size range which is critical to the capabilities of the panel. The prior art cited by the Examiner fails to teach or suggest the combination of features claimed and the rejection of Claims 14 and 15 is also believed to be in error.

It is noted throughout the rejection of Claims 11 through 16, 18 and 19, as set forth in the final rejection, that the Examiner has taken the position that it would be obvious to provide window covering panels with groupings of threads and an opening size range as required by Appellants' claims. However, none of the references disclose or suggest this combination. Appellants respectfully submit that claim limitations must be disclosed by or at least suggested by the prior art. This is clearly not the case with respect to the prior art cited by the Examiner in the final rejection. Appellants respectfully submit that the Examiner has erred in rejecting Claims 11 through 16, 18 and 19 over the prior art of record, the claims as presented for consideration on appeal are allowable and that such claims should be passed to issue.

Respectfully submitted,

Date: 7/20/04

Michael E. Martin
Registration No. 24,821
Agent for Appellants

Gardere Wynne Sewell LLP
1601 Elm Street, Suite 3000
Dallas, Texas 75201-4761
Phone (214) 999-4052
Fax (214) 999-3052

APPENDIX TO BRIEF ON APPEAL

Claim 11. A light transmitting window covering panel formed of a fabric comprising staple fiber acrylic yarn woven in groups of warp threads and groups of weft threads, the fiber content of said yarn being about 100 percent pigmented acrylonitrile polymer, and the weave density being such as to provide openings between said groups of warp threads and said groups of weft threads of about 0.03 inches to 0.25 inches to provide human visual perception through said panel and blocking the transmission of ultraviolet light through said panel in A category wavelength in a range of about 69 percent to 76 percent and in B category wavelength in a range of about 74 percent to 78 percent.

Claim 12. The window covering set forth in Claim 11 wherein:

each group of warp threads comprises three threads disposed adjacent one another between said openings, respectively.

Claim 13. The window covering set forth in Claim 11 wherein:

each group of weft threads comprises three threads disposed adjacent one another between said openings, respectively.

Claim 14. The window covering set forth in Claim 11 wherein:

the yarn weight is not less than a yarn number of about 24.

Claim 15. The window covering set forth in Claim 14 wherein:

the yarn is 2 ply.

Claim 16. A light transmitting window covering panel comprising an ultraviolet radiation resistant fabric formed of acrylic yarn woven in groups of warp threads and groups of weft threads, the fiber content of said yarn being about 100 percent pigmented acrylonitrile polymer, the yarn weight being not less than a yarn number of about 24 and the weave density of said fabric is such as to provide openings between groups of adjacent warp threads and groups of adjacent weft threads in a range of about 0.03 to .25 inches square to provide human visual perception through said panel and blocking the transmission of ultraviolet light through said panel in A category wavelength of at least about 69 percent and in B category wavelength of at least about 74 percent.

Claim 18. The window covering set forth in Claim 16 wherein:

each group of warp threads comprises three threads disposed adjacent one another between said openings, respectively.

Claim 19. The window covering set forth in Claim 16 wherein:

each group of weft threads comprises three threads disposed adjacent one another between said openings, respectively.